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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/457,021	12/07/1999	JACK B. HOLLINS	M-8138-US	7210

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EXAMINER	
JAIN, RAJ K	

ART UNIT	PAPER NUMBER
2664	12

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/457,021	HOLLINS, JACK B.	
	Examiner	Art Unit	
	Raj Jain	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2004* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5 and 12-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5 and 12-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Objections

Claims 3 and 15are objected to because of the following informalities: Claims are duplicate in nature. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-5, 12-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takamoto et al (US Pat 6,449,631) in view of Chiussi (US006532213B1).

Regarding claims 1, and 13, Takamoto discloses a method of preparing data for transmission, the method comprising:

- transmitting a first signal requesting permission to transmit data (col 1 L22-30);

- generating a first packet (**fig 2 & 4**) from data of a first source prior to receiving a second signal granting the permission to transmit data (**col 6 L36-50, generation of a "packet" is inherent for data transmission from source to destination within the subject invention**);

Takamoto further discloses the transmitting of a third signal in the form of retransmission due in part to packet loss or non-reception at the receiving destination.

Takamoto fails to disclose changing of data source from one source to another source when the first data source is incomplete.

Chiussi discloses the changing of data source from one source to another source when the first data source is incomplete and therefore generates data packet from the data of the second source, (**abstract; figs 1-3, 7; col 1 L20-35, col 4 L55-col 5 L25**),

The use of multiple sources (queues) of data for transmission provides for packet-scheduling, necessary to satisfy the QoS requirements of delay-sensitive applications, and ensure that real-time traffic and best-effort traffic can coexist on the same network infrastructure.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include data source change from one to the other (as taught within Chiussi) within Takamoto so as to provide a continuous stream of data so as to satisfy the QoS requirements of delay-sensitive applications, and ensure that real-time traffic and best-effort traffic can coexist on the same network infrastructure.

Regarding claims 12 and 27, Takamoto discloses a method of preparing data for transmission, the method comprising:

- transmitting a first signal requesting permission to transmit data (col 1 L22-30);

- generating a first packet (**fig 2 & 4**) from data of a first source prior to receiving a second signal granting the permission to transmit data (**col 6 L36-50, generation of a "packet" is inherent for data transmission from source to destination within the subject invention**);

Takamoto further discloses the transmitting of a third signal in the form of retransmission due in part to packet loss or non-reception at the receiving destination.

Takamoto fails to disclose transmitting of the third signal in response to time stamp differences within the data packets being transmitted.

Chiussi discloses transmitting of the data packets in response to time stamp differences within the data packets being transmitted and therefore generates data packet from the data of the second source, **(abstract; figs 1-3, 7; col 1 L20-35, col 4 L55-col 5 L30)**.

The use of multiple sources (queues) of data for transmission provides for packet-scheduling, necessary to satisfy the QoS requirements of delay-sensitive applications, and ensure that real-time traffic and best-effort traffic can coexist on the same network infrastructure. Timestamping of packets provides for traffic shaping using the FIFO queuing scheme for different delay classes of traffic.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include data source change from one to the other (as taught within Chiussi) within Takamoto so as to provide a continuous stream of data so as to satisfy the QoS requirements of delay-sensitive applications, and ensure that real-time traffic and best-effort traffic can coexist on the same network infrastructure.

Regarding claims 3 and 15, Chiussi discloses timestamping of data packets **(col 5 L1-30)**.

Regarding claim 4, Takamoto discloses discarding of data packets as part of packet transmitting program (2404) **(Fig 9; col 9 L19-43)**.

Regarding claim 5, Takamoto discloses transmitting of the third signal occurs after said receiving of said second signal **(fig 4)**.

Regarding claim 14, Takamto discloses a link controller generating a second packet when the second signal is active **(fig 4, 402 and 403)**.

Regarding claims 18 and 24, Takamto discloses transmitting of data packets based on inactivity of third signal for specified period of time (col 8 L25-31).

Regarding claims 19 and 25, Takamto discloses discarding of data packets based on transmission of third signal within a specified period (col 8 L31-47).

Regarding claim 21, Takamto discloses transmission of the third signal when data of the first source is incomplete (abstract, fig 4; col 8 L4-20), the re-transmission occurs due to lost packets or error in the original transmission (incomplete) and therefore the source does not receive an acknowledgement, and therefore requiring retransmission of the packet.

Claims 16, 20, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takamoto et al (US Pat 6,449,631) in view of Chiussi (US006532213B1) and further in view of Sung (US Pat. 6,317,440).

Regarding claims 16 and 22, Takamoto discloses a method of preparing data for transmission with acknowledgement signaling back to the original source for retransmission in case of lost packets and or errors in transmission.

Chiussi discloses data transfer guarantees in a packet data network via use of multiple queues with earliest packet scheduling technique (FIFO).

Takamoto and Chiussi fail to disclose transmission of an empty packet without data.

Sung discloses transmission of an empty packet (abstract; col 3 L20-55).

The transmission of an empty packet allows for transmission time controlling means for controlling a point of time for transmitting source packets and empty packets in order to convert the transmission timing of an inner bus of a digital device to a timing predesignated in the transmission specification.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include empty packets within Chiussi so as to allow for transmission time controlling for transmitting source and empty packets to convert the transmission timing of an inner bus of a digital device to a timing predesignated in the transmission specification.

Regarding claims 20 and 26, Takamoto discloses a method of preparing data for transmission with acknowledgement signaling back to the original source for retransmission in case of lost packets and or errors in transmission.

Chiussi discloses data transfer guarantees in a packet data network via use of multiple queues with earliest packet scheduling technique (FIFO).

Takamoto and Chiussi fail to disclose an isochronous (IEEE 1394) packet transmission.

Sung discloses an isochronous (IEEE 1394) packet transmission (abstract; col 1-2).

The use of isochronous packet transmission allows for high data transfer rates for applications with time sensitive requirements. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an IEEE 1394 transmission interface that allows for high data rates for applications with time sensitive requirements.

Claims 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takamoto et al (US Pat 6,449,631) in view of Chiussi (US006532213B1) and further in view of Deng (US Pat. 6,347,097). Takamoto discloses a method of preparing data for transmission with acknowledgement signaling back to the original source for retransmission in case of lost packets and or errors in transmission.

Chiussi discloses data transfer guarantees in a packet data network via use of multiple queues with earliest packet scheduling technique (FIFO).

Takamoto and Chiussi fail to disclose speed code for data packet transmission.

Deng discloses speed code for data packet transmission (col 1 L50-64). The speed code indicates the highest communication speed of two nodes, which allows for packet speed selection for all types of data packets allowed by the IEEE standard. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a speed code field within the data packets of Chiussi helping to identify the highest communication speed of subject nodes of interest and providing appropriate data rates for the required applications as appropriate (audio, video, etc).

Response to Arguments

Applicant's arguments with respect to claims 1, 3-5, and 12-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 703-305-5652. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

RJ
March 11, 2004

WELLINGTON CHIN
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